TVAC10100

User manual

Version 11/2009

Original English user manual. Keep for future use.

English

Introduction

Dear Customer,

Thank you for purchasing this product.

This product meets the requirements of the applicable European and national guidelines. The corresponding declarations and documents can be obtained from the manufacturer (www.abus-sc.com).

To maintain this condition and to ensure risk-free operation, you as the user must observe these operation instructions!

Before initial start-up, read through the complete operating instructions observing operating and safety instructions.

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All rights reserved.**

If you have any questions, please contact your installer or your local dealer!

Disclaimer

This user manual was prepared with greatest care. If you should notice omissions or inaccuracies, please inform us about these on the back of this manual given address.
The ABUS Security-Center GmbH assumes no liability for technical and typographical faults and reserves the right to make at any time modifications to the product or user manual without a previous announcement.
The company is not liable or responsible for direct and indirect subsequent damages which are caused in connection with the equipment, the performance and the use of this product.
No guarantee for the content of this document is taken.

Explanation of Symbols

The triangle with a lightning bolt warns about dangers such as electric shock.

A triangle with an exclamation mark indicates important instructions that must be followed.

A triangle with the letter "i" marks special tips and notes for operating the device.

Important Safety Instructions

Damages resulting from noncompliance with instructions in this manual void any warranties. We do not assume liability for consequential damages!

We do not assume liability for damages to things or persons that result from improper handling or disregarding safety instructions. In such cases all warranties are voided!

Do not perform voltage measurements during the recharge cycle.
The battery can explode and cause fatal injuries.

Dear Customers, the following safety instructions and danger descriptions are meant to protect you as well as the device. Please carefully read the following points:

Improper handling of any electrical device can lead to fire, electric shock, or injury. In order to ensure safe operation, please follow these guidelines:

- Follow all warnings and safety instructions in this manual.
- There are no maintainable parts inside this product. Opening or disassembling the product voids both certification (CE) and warranties.

During operation avoid the following adverse environmental conditions:

- Moisture or high humidity
- Extreme cold or hot temperatures
- Direct sunlight
- Dust, flammable gases, steam, smoke, or solvents
- Strong vibrations
- Strong magnetic fields, as occur near machines or loudspeakers.

General Safety Instructions:

- Do not leave the package material lying around! Plastic foil/bags, styrofoam parts, etc. can become dangerous play things for children.
- The test monitor has small ingestible parts and is thus unsafe for children. Please keep device and accessories out of reach of children.
- Please do not insert anything through the openings of the device.
- Please follow the safety instructions and operating instructions of the connected devices.
- Inspect the device for damages before turning it on. In case of damages, please do not turn on the device!
- Ensure that no liquids or foreign particles can enter the device or the accessories.
- Do not throw the device and its accessories, do not let it drop, do not step on it, and do not subject it to heavy impacts.

Using the Power Supply

- Only use the supplied battery and power supply as power source. Using any other battery can lead to fire and explosion.
- Ensure that no dust or foreign particles can accumulate near the connectors of device and accessories, since this creates fire or electric shock hazards.
- Ensure that nobody steps on the power supply and that it cannot be squeezed, especially near the plug or near the connection to the system.

LCD Screen

- Heavy pressure can destroy the LCD screen.
- Using the system in a cold environment can cause display errors. This is not a malfunction and the LCD screen will work normal again when the environment temperature increases.
- Localized black (dark) or bright spots can appear and stay on the screen. Such spots are normal for LCD screens and do not represent a malfunction. In spite of high precision technology used in manufacturing, a very small number of dark and permanently bright pixels is unavoidable. After turning it off, it is also possible that a distorted picture remains visible for several seconds.

WARNING – BATTERY NOTES

Do not touch damaged or leaking batteries.

The test monitor contains a rechargeable lithium-ion battery. Leaking substances from the battery pack or burn residues can cause injury and damage the test monitor, rendering it unusable. Contact with such substances can lead to injury and chemical burns in eyes or skin. Even if such substances are not immediately visible, chemical processes can still cause damages later.

If you come into contact with a leaking battery or leaked-out liquid, follow these steps:

- If the substance gets into your eyes, do not rub your eyes. Rinse your eyes immediately with clear water and seek medical help.
- If leaking battery acid comes into contact with your skin or clothing, rinse the affected area immediately with clear water. Seek medical help if the area gets inflamed or the skin becomes sore.

Please follow these instructions to avoid leakage of battery acid, burns, and explosions.

If you do not handle the battery properly, it can explode and cause fire and/or chemical burns.

- Do not expose the battery to fire or extreme temperatures such as direct sunlight, in a vehicle in the sun, or near a heat source.
- Do not try to dismantle the battery, to repair it, or to manipulate it in some other manner.
- Ensure that no short circuits occur at the battery. Do not touch the battery contacts with any metal or other items.
- Ensure that the battery does not get damaged. Do not transport or store the battery together with metallic items such as coins or keys. If the battery is damaged, do not use it any more.
- Do not throw the battery, drop it, or subject it to strong impacts.
- Do not place heavy items on the battery and do not apply any pressure to them.
- Keep the battery away from liquids.
- If you do not want to use the test monitor for a while, remove the battery and store it in a cool, dry place where it is out of the reach of children.

English

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1. Proper use

This ABUS test monitor can be used for configuring and installing video surveillance cameras. It also allows you to test continuity, speed dome, and power supply.

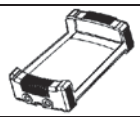
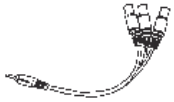
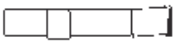
By attaching the test monitor to your wrist, you have your hands free for installing and testing the cameras.

You can find an in-depth functional description in chapter "3. Features and Functions."

Uses other than the ones mentioned above can lead to product damage or other dangers. Any other application is considered improper use and voids any warranties; any liability is excluded. This also applies if the product is modified in any way.

Please carefully read the entire operating instructions before using the product. The operating instructions contain important information for installation and operation.

2. Package contents

	bag		sensor
	protective cover		video cable
	connection terminals		neck strap
	battery		wide strap
	power supply		wrist strap

3. Features and Functions

- Simple installation of cameras and speed domes
- Possibility for testing cables
- Measuring AC voltage, DC voltage, and video signal
- Compact, robust housing including protective cover
- Battery powered
- Test image generator

4. Description of the Device

4.1. Overview – Type Number

Type number	TVAC10100
Screen dimensions	3,5''
Resolution	320 x 240

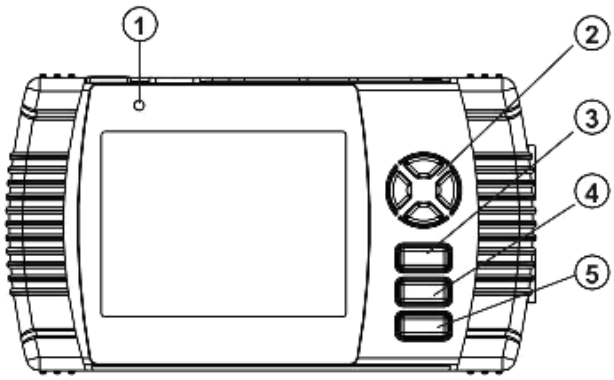
4.2. Unpacking

Unpack the device with utmost care.

In case of damaged original packaging, inspect the device first. If the device shows any damage, send it back with the packaging and inform the delivery service.

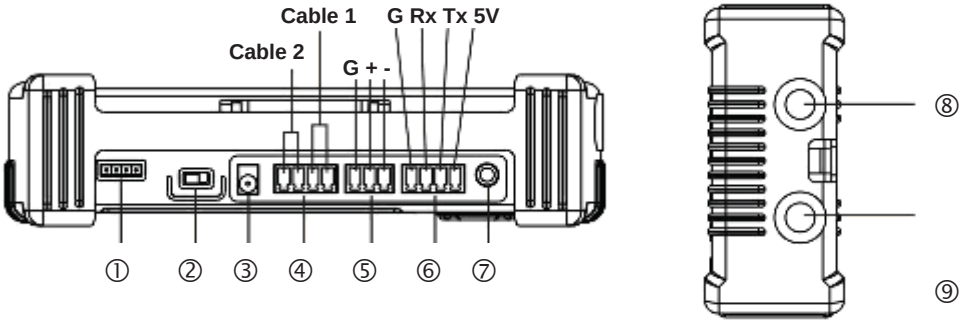
5. Description of the housing

5.1. Explanation of the buttons



① Status display	Green: battery operation Red: power supply operation / recharging
② Control buttons	Arrow buttons for controlling the menu
③ Menu button	Menu for parameter settings
④ Mode button	Selecting the test mode
⑤ Power button	Turns the monitor on or off

5.2. Description of the connectors



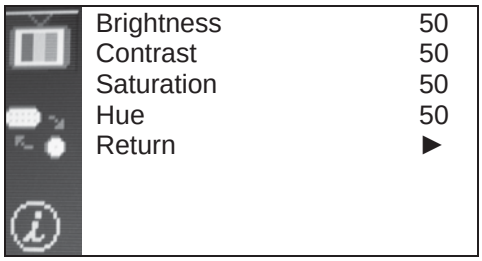
① ISP interface	Interface for firmware updates
② Power switch	Turning the monitor on or off.
③ Voltage DC 9V	Power supply socket for charging the integrated battery. Please use only the included power supply.
④ Cable interface Continuity tester	With this terminal you can test 2 cables for continuity at the same time.
⑤ PTZ interface	Speed dome protocol test for RS485 +/- interfaces Pelco D and P protocol
⑥ RS-232 interface	Service interface
⑦ Video connection	Socket for AV adapter cable
⑧ Socket for sensor tip	+ sensor tip for AC / DC voltage measurement
⑨ Socket for sensor tip	- sensor tip for AC / DC voltage measurement

6. Menu

6.1. Menu guidance

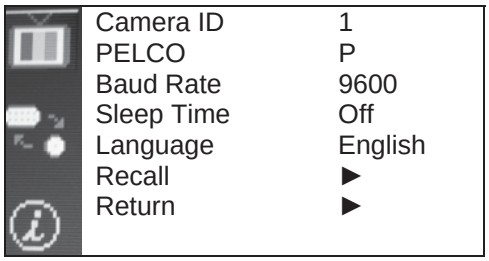
MENU	• Starting the OSD (on-screen display) • Opening sub menus • Selecting a menu item for editing • Confirming a selected value
▲▼	• Switching between menu items
◄►	• Setting the values

6.2. Monitor settings



Brightness	Setting brightness between 0 and 100%
Contrast	Setting image contrasts between 0 and 100%
Saturation	Setting color saturation between 0 and 100%
Hue	Setting hue between 0 and 100% (only possible when monitor does not display anything)
Return	Select this menu item to go back to the main menu.

6.3. Miscellaneous Settings

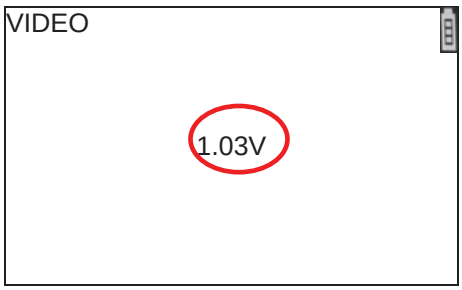


Camera ID	Setting the speed dome camera ID
Pelco	Selecting the control protocol (Pelco D or P)
Baud Rate	Selecting the baud rate for data transfer 2400, 4800 or 9600 bit/s
Sleep Time	The monitor automatically turns off after a predefined time of inactivity.
Language	Selecting the menu language. (English, German, French, Dutch, Danish)
Recall	The monitor is set back to the factory settings.
Return	Select this menu item to go back to the main menu.

7. Selecting the Measurement Procedure

7.1. Video and audio level

- Turn the monitor on and select the video mode by pushing the mode button.
- Connect the yellow BNC plug of the video cable via the video extension cable to the video output of the camera.
  If the camera supports audio, connect the audio signal to the white plug of the video cable.
  The monitor automatically recognizes video signal standards NTSC or PAL.
  Use the ▲▼ arrow buttons to turn the audio input of the monitor on or off.
  The display shows an info box with audio on / audio off.



This info box shows the video signal level.

If you measure the video signal directly at the camera, a voltage over 1 Vp-p can occur.
The video signal level is higher to equalize losses over the cable distance.

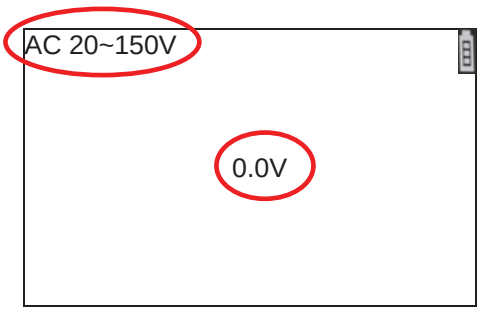
7.2. AC voltage measurement

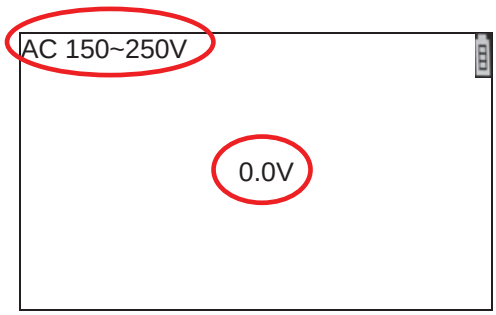
Do not perform voltage measurements during the recharge cycle.
The battery can explode and cause fatal injuries.

Connect the sensors to the appropriate monitor jacks. Please ensure that the correct measurement procedure is selected.
The measurement range for alternating currents lies between 20 – 250 VAC.

Mode Select:
Mode 1: 20 – 150 VAC
Mode 2. 150 – 250 VAC

The measurement results are displayed as follows:





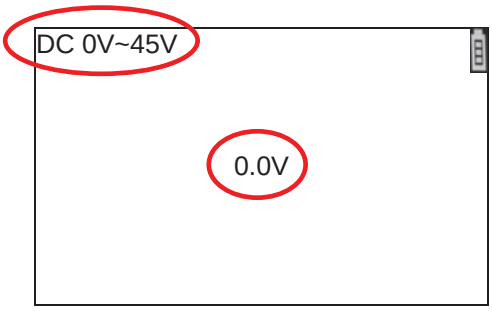
7.3. DC voltage measurement

Do not perform voltage measurements during the recharge cycle.
The battery can explode and cause fatal injuries.
Ensure that no devices are attached while you perform a voltage measurement.

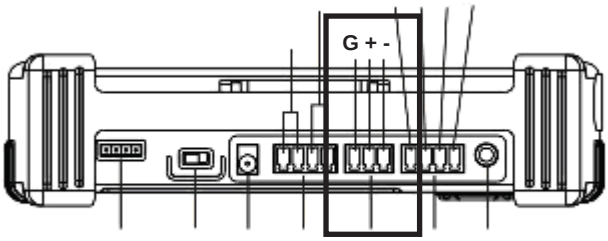
Connect the sensors to the appropriate monitor jacks. Please ensure that the correct measurement procedure is selected.
The measurement range for direct current lies between 0 – 45 VDC.

Please pay attention to correct polarity. With wrong polarity, voltage measurement will not work.

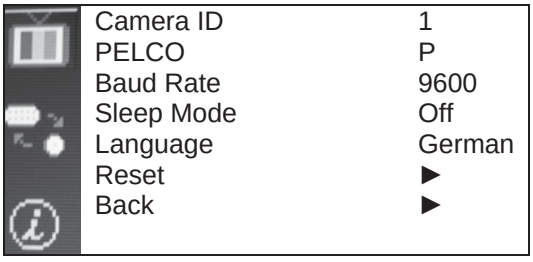
The measurement results are displayed as follows:



7.4. PTZ control



Select RS485 PTZ control via the mode button.
Connect the data cables of the speed dome with the +/- terminals of the ⑤ PTZ interface. Pay attention to correct polarity.



Push the menu button to open the menu. Push the ▼ button until you reach the settings for the RS-485 interface.

Push the menu button again to open the submenu for the RS485 settings.
Use the ▲▼ buttons to navigate through the menu.
Keep pushing the menu button to open the respective subitem.
Use the ◄► buttons to change the settings for the respective subitem.
Use the menu button to confirm your change.

For correct operation of the speed dome, the settings of the monitor's RS485 interface must match the speed dome settings.

e.g.	Camera ID	1	(identification number of the camera)
	Pelco	D	(Setting the control protocol to Pelco D or P)
	Baud rate	4800	(baud rate setting for the control signals)

Controlling the camera:
You can steer the camera with the arrow buttons.

Zooming the camera:

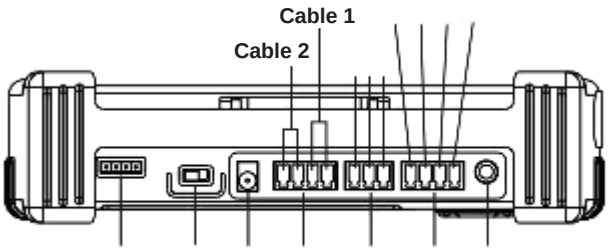
Zoom in:	Push the ▲ and ► buttons simultaneously
Zoom out:	Push the ▼ and ◄ buttons simultaneously.

7.5. Continuity test

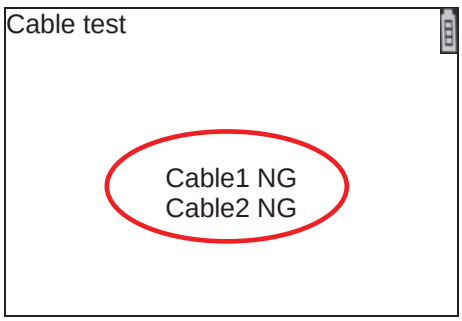
The test monitor enables you to test 2 cables for short circuits. Connect the cables on one side to perform a continuity test.

Use the MODE button so select the continuity test mode („cable test“).

Connect the first cable to the right connector and/or the second cable to the left connector of the terminal strip.



The measurement result is displayed as follows:



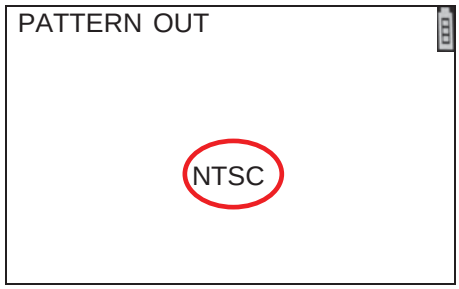
OK	There is no interruption
NG	The cable shows an interruption.

7.6. Color sample test

The test monitor enables you to adjust the colors of a monitor.

Select the sample test menu item using the MODE button.

Now you can connect the black plug of the video cable to the input of a monitor. An eight-color standard test image appears on the screen.



Push the ▼ button to switch between the video standards NTSC or PAL.

8. Maintenance and cleaning

8.1. Maintenance

8.1.1. Functional test

Regularly check the product's physical state, e.g. check for damage of the housing.

If you suspect that safe operation cannot be guaranteed anymore, disconnect the product and ensure that it cannot be used by mistake. Remove the batteries.

You can assume that safe operation is not possible anymore when

- the device shows visible damage,
- the device does not function anymore

Please note:

The product is maintenance free for you. Inside the product are no parts that can be checked or repaired, so do not ever open it (except for changing the batteries as described in these operating instructions).

8.1.2. Recharging the battery

The power display (battery symbol in the left upper corner of the LCD display) shows the current charge of the Li-ion battery.

If the battery is empty - empty battery symbol - turn off the device and connect it to the supplied power supply. The ① status display appears red. Once it turns off (ca. 2 - 3 h), the battery is fully charged.

Please note:

Only use the supplied battery and power supply as power source. Using another battery or power supply can destroy the device. Overloading the batteries by using an unsupported power supply can cause the battery to explode.

Ensure that no dust or foreign particles can accumulate near the connectors of device and accessories, since this creates fire or electric shock hazards.

Ensure that nobody steps on the power supply and that it cannot be squeezed, especially near the plug or near the connection to the system.

8.2. Cleaning

Wipe the product with a clean, dry cloth. If the device is very dirty, you can moisten the cloth with lukewarm water.

Ensure that no liquids can get into the device.
Do not use any chemical cleaners, since they could damage the housing surface or the screen (discolorations).

9. Disposal

9.1. General

Devices with this marking should not be put in the household garbage. Dispose of the product at the end of its lifetime according to the applicable regulations.

9.2. Battery disposal

Dispose of used batteries according to your local regulations.

Protect your environment.

10. Technical Specifications

Type number	TVAC10100
Monitor type	LED
Screen diagonal	3,5“
Resolution	320 x 240 Pixel
Pixel distance	0.219 mm x 0.219 mm
Image format	4:3
Video system	PAL / NTSC
Signal detection	Automatic
Contrast ratio	350 : 1
Brightness	300 cd/m^2
Color levels	16.7M
Viewing angle horiz. / vert.	120° x 100°
Response time	25 ms
Frequency range	50Hz / 60Hz
Functions	Speed Dome test, continuity test, AC/DC voltage measurement
OSD menu	Graphic OSD
OSD languages	German, English, French, Dutch, Danish, Italian, Spanish
Inputs	BNC, Audio
Outputs	BNC, RS-485, DC/AC
Speaker	1 W
Housing material	Plastic
Display	matt
Power supply	9 VDC
Power consumption	400 mA during battery operation 2.5 A during charging mode
Battery run time	4 hrs
Operating temperature	0°C to 45°C
Humidity	Max. 90%
Dimensions	156 x 90 x 38 mm (including protective cover)
Weight	290 g